printing head (1), and a means for controlling the advance of the ribbon, (3). Said means for controlling the advance of the ribbon (3) comprises a device (7) for detecting the spin of the pay-out spool (4) and sending a signal to the control device (8) that reports on the spinning of the pay-out spool (4) when the stepper motor (6) makes the take-up spool (5) spin at a certain rate. The invention also includes a method for using this label printer for multiple label printing.

Drawings

Applicant submits the following corrected drawing:

Figure 1 has elements 5 and 6 reversed. A marked up drawing and a corrected drawing of figure 1 are attached.

Remarks

Claim Rejections Section 103(a)

Claim 1 has been cancelled.

Allowed Claims

Claim 2 has been amended to provide antecedent basis for the allowed method claim.

Applicant believes that the pending claim is patentable, and respectfully request allowance.

The Commissioner is hereby authorized to charge any additional fees which may be required in this application to Deposit Account No. 06-0040 of the undersigned attorney. In the case of overpayment, please credit the same account.

Respectfully submitted,

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LISTING OF CLAIMS

1. Cancelled

2. (Currently amended) A method for multiple label printing with a thermal-transfer label printer with rewind control, of the kind that comprises a printing head (1), which is movable along a guide (2), a ribbon (3) bearing a printing medium intended to be thermally transferred by the printing head onto the product to be labeled during the labeling operation, a ribbon pay-out spool (4), a ribbon take-up spool (5) driven by a stepper motor (6), a control device (8) that governs the printing head (1), and a means for controlling the advance of the ribbon (3) from the pay-out spool (4) to the take-up spool (5), where the ribbon (3) follows a path that is parallel to the printing head (1) during an intermediate stage of its path as a whole; characterized in that the means for controlling the advance of the ribbon (3) comprises a device (7) for detecting the spin of the pay-out spool (4) and sending a signal to the control device (8) that reports on the spinning of the pay-out spool (4) when the stepper motor (6) makes the take-up spool (5) spin at a certain rate, and said control device (8) then computes the linear advance of the printing ribbon (3) on the basis of the spinning of the stepper motor (6), the spinning of the ribbon pay-out spool, and the initial radius of the ribbon reel (3) fitted in the pay-out spool (4), and wherein said printing method is further characterized in that it comprises the following stages:

a) the approach of the printing head (1) to the ribbon (3) and the advance of that head along its guide (2) in order to print the initial labels consecutively through the thermal transfer of the printing medium at zones (11, 11') of the ribbon onto the product to be

labeled, leaving a space (e) between the used zones (11 and 11') of the ribbon that is longer than one of those zones (11 or 11');

b) the moving of the printing head (1) away from the ribbon (3) and the head's return along its guide (2) to its initial position, while the ribbon (3) advances over a distance that is slightly longer than one of the used zones (11 or 11') on the ribbon (3);

c) the calculation by the control device (8) of the maximum number of printing actions to be performed using space (e) on the ribbon, on the basis of the length of said printing actions and of the space (e) between the zones (11, 11') of the ribbon used for the earlier printing actions;

d) the repetition of stages a) and b) to arrange, through successive travel runs by the printing head (1), the consecutive printing of several groups of labels by the thermal transfer of the printing medium existing in zones (12, 12'), (13, 13') (14, 14'), leaving the largest possible number of used zones (12, 13, 14) within space (e);

e) the advance, under the control of the control device (8) of a length of ribbon (3) that is slightly longer than the length occupied by the used zones (11', 12', 13' and 14') of the ribbon (3), so that the label printer, in its various printing-head (1) passes, can perform further printing actions by repeating the above stages.

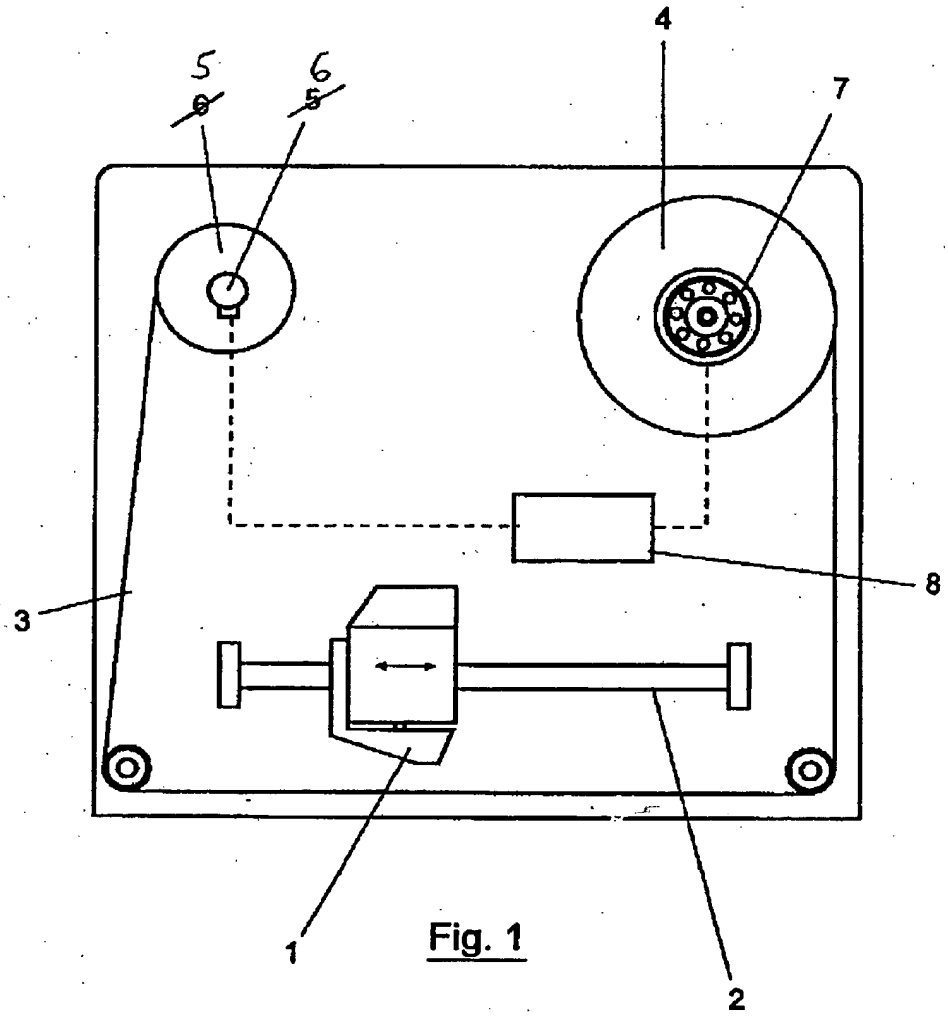

Fig. 1

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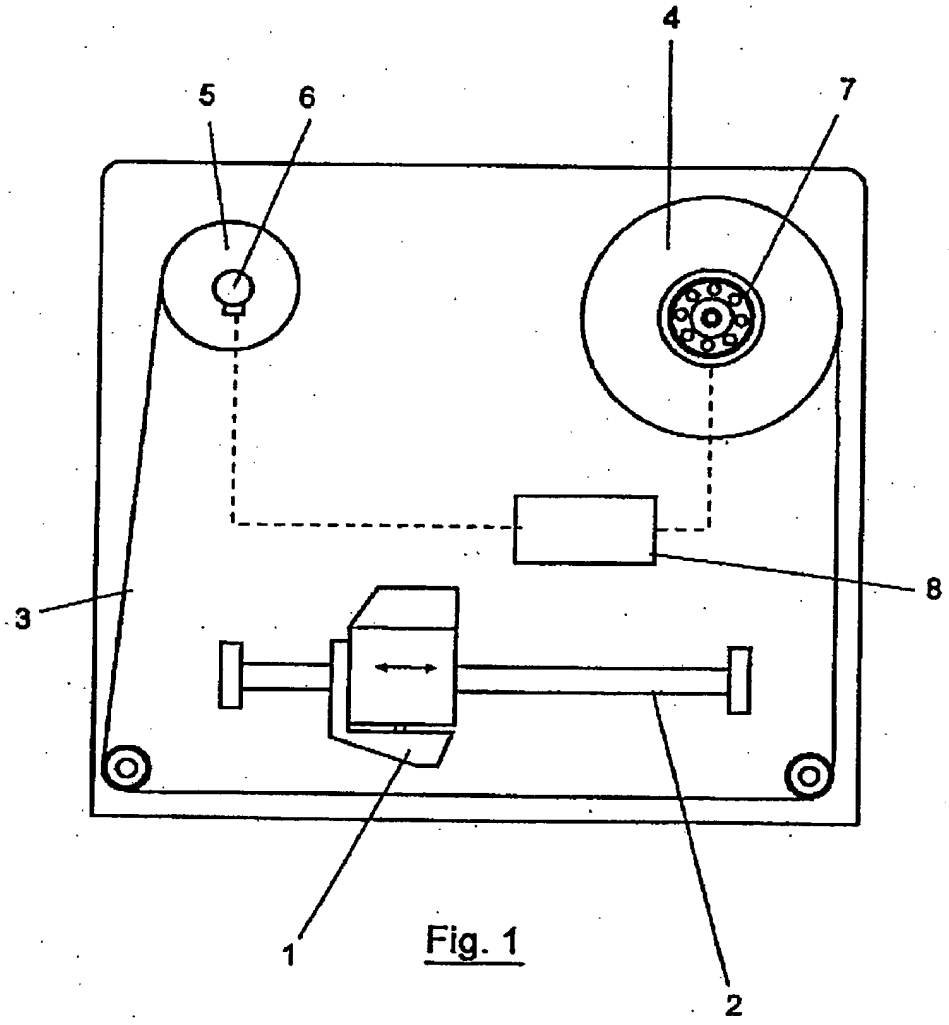

Fig. 1